



City of Riverside  
Park & Recreation Department  
Urban Forest Section  
3900 Main Street  
Riverside, CA 92522

# **Tree Policy Manual Approved by City Council December 17, 2002**

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## **Introduction**

The City of Riverside is known as a ‘City of Trees’. Trees beautify the landscape and enhance the quality of life for all residents. The National Arbor Day Foundation has recognized our City as a “Tree City, USA” since 1987 in honor of the care we provide for our trees. The purpose of the Tree Policy Manual (“Manual”) is to provide guidelines for the preservation and protection of our tree heritage and the Urban Forest of Riverside. This Tree Policy Manual supercedes the 1984 Street Tree Policy.

The following pages document guidelines for the planting, pruning, preservation and removal of all trees in City right-of-ways. These specifications are based on national standards for tree care established by the International Society of Arboriculture, the National Arborists Association and the American National Standards Institute. This Manual incorporates input from the Park & Recreation staff, Park & Recreation Commission, City Council, various other Commissions, and the citizens of Riverside.

This Manual is a reference for use by City staff, private contractors, volunteer organizations and citizens when working in and around trees within City jurisdiction.

## **Who Cares for the Urban and Community Forest?**

The 100,000 street trees and 40,000 park and open space trees throughout Riverside are a community asset valued at more than \$150,000,000. The urban forest provides environmental benefits, adds to property value and provides an enhanced quality of life for all residents.

Unfortunately, Riverside's trees suffer from the rigors of urban life such as air pollution, limited water, vandalism, compacted soils, limited growing spaces, and the extremes of our Southern California climate. In order to reap the benefits of this valuable asset, the care of Riverside's Urban Forest must be a public/private partnership.

### **The City Council**

Elected officials who provide leadership, at the request of citizens, ensure that trees are a priority in our community. The City Council oversees the general fund, which supports the planting, and care of the urban forest. They also make decisions regarding policies and ordinances, which pertain to the care and protection of trees on public property and the development of private property as it pertains to street trees.

### **Park & Recreation Commission**

Appointed by the City Council, this nine-member Commission oversees the Urban and Community Forestry Program. The Charter of the City of Riverside, Article VIII, Section 809(d), provides that the Commission has the power and duty to "Establish policies . . . for the planting, care and removal of trees and shrubs in all parks, playgrounds and streets, subject to the rights and powers of the city council."

### **Urban and Community Forest Subcommittee**

The Park & Recreation Commission Chair appoints this three-member committee yearly. The Committee, together with the Urban Forester, discusses issues and visit sites to make recommendations to the full Commission on issues having to do with trees and shrubs in public spaces.

### **Park & Recreation Department**

The Department, under the guidance of the Park & Recreation Director, provides the daily management and emergency services which sustain our urban forest. The Urban Forestry Section employs an experienced Urban Forester who specializes in the management of urban and community forests. This Section provides planting and maintenance services and also oversees all contracted and permitted tree work on City trees. The administrative staff provides clerical support and upkeep of a

computerized tree inventory. They also provide daily communication for the public who have concerns about trees.

## **Funding for the Urban and Community Forest**

The primary source for funding is the General Fund. In an effort to augment limited City resources available for urban forestry, additional funding sources are often sought. Alternatives include a “Perpetual Tree Care Fund,” public grants, private donations, and the use of volunteer support.

### **Riverside’s Perpetual Tree Care Fund**

This fund is separate from the general fund. It is managed through the Riverside Chamber of Commerce solely for the enhancement of the community forestry program. Sources of revenue for the fund include contributions directly to the fund and other private donations. Tax-deductible contributions may be made to the Riverside Perpetual Tree Care Fund c/o the Greater Riverside Chambers of Commerce, 3985 University Avenue, Riverside, CA 92501.

### **Grants**

The staff of the Park & Recreation Department actively research the availability of grants for community forestry programs. Monies from these grants help to augment and sustain the urban forest.

## **Tree Care Guidelines**

The care and maintenance of the City trees is both an investment and a very valuable resource. Trees in an urban environment suffer from many impacts: air pollution reduces a tree's ability to make food; compacted soils from development of roads and structures interfere with the uptake of nutrients and water; and sidewalks, curbs, streets and buildings limit the space for trees to spread their roots and branches. Tree care, such as deep watering, proper pruning and pest control help a tree maintain its health and stability.

The guidelines in this Manual were developed to help reduce the many negative impacts on City trees and to provide for effective management of the urban forest. Following the tree pruning, tree planting and other guidelines in this Manual will result in an increase in the value of our trees and a decrease in the costs to maintain them.

### **Cultural Practices**

Practices such as deep watering, prevention of damage to bark from string trimmers and mowers, the use of mulch or wood chips and proper pruning and staking, provide preventative care for trees. These practices help keep a tree healthy so it can maintain its own natural defense system.

### **Pest Control**

Proper planting, pruning and care of trees are the best way to prevent pest problems. A tree has a natural ability to withstand a certain amount of insects and disease. When a tree suffers from other impacts, which deplete its food making capability (photosynthesis) and uptake of water and nutrients, its natural defenses are weakened.

When insect and/or disease infestations become a detriment to the tree, controls are used. When pest control is recommended, natural or biological substances are considered first, with chemical pesticides used only when warranted.

Pest control is based on the timing and intensity of the insect infestation. Inspections of trees are made based on the time of year and weather conditions that have favored the development of insect problems in past years. Not all problems are predictable and may not be treatable. If there are requests by residents, an inspection is conducted and recommendations are made based on the timing and effectiveness of the control.

# **Tree Pruning Guidelines**

## **Need for Pruning**

Trees are pruned principally to preserve their health and appearance and to prevent damage to human life and to property. Broken, dead, or diseased branches are pruned to prevent decay from spreading. Live branches are removed to permit penetration of sunlight and air circulation which helps maintain a strong and healthy tree.

All public trees should be completely pruned on a periodic basis based on species needs. Frequency depends on funding levels.

Additional tree pruning is done on an “as needed” basis. Specific examples where as needed work is authorized are:

1. Pruning tree limbs that interfere with city utility lines.
2. Pruning tree limbs that interfere with street light illumination that are not scheduled for periodic pruning within two (2) years.
3. Pruning tree limbs that interfere with buildings or other private or public facilities.
4. Pruning hazardous limbs, such as large dead limbs greater than two (2) inches in diameter, hangers and structurally unsound limbs.
5. Pruning tree limbs that interfere with safe vehicular or pedestrian traffic.
6. Sucker pruning.

## **Property Owners Ability to Prune Trees**

There are two options available to property owners that would like to have the public tree(s) pruned more frequently. First, the designated fee (see attached) may be paid to the City and its contractor will prune the trees within 90 days. Second, the public may apply for a permit and hire their own contractor who is licensed and insured to trim the tree(s) according to the City’s standards. A property owner may raise mature trees to eight (8) feet for clearance without a permit.

## **Tree Pruning Specifications**

Any tree work performed on a City tree must be done according to the City’s specifications. There are different criteria for pruning depending on the purpose for the pruning.

- Complete Pruning Specifications are used when the entire tree needs to be fully pruned.
- Safety Pruning Specifications require less pruning and are used when specific, possibly hazardous (dead/dying) limbs need removal to eliminate all safety concerns. Safety

pruning may be recommended in some circumstances instead of complete pruning. Safety pruning specifications are used for “as needed” pruning and address only safety concerns. Safety pruning includes only the basic requirements to address the problem.

- Where overhead wires pass through trees, safety and reliability of service demand that tree trimming be done in order that the wires may clear branches and foliage by a reasonable distance. The minimum clearances must be followed as established by the California Public Utilities Commission General Order No. 95.

All specifications are based on International Society of Arboriculture, National Arborist Association and American National Standards Institute criteria. This guarantees that Riverside’s City trees receive the best possible care.

The following trimming specifications are for the use of any permitted pruning of City trees.

### **Method of Operation**

- a. Lightly trim all trees to lighten and balance the trees, removing no more than 15 - 20% of the tree.
- b. Remove dead wood and cross branches.
- c. Remove all suckers.
- d. Remove all diseased branches.
- e. Encourage radial distribution of all branches to provide sufficient number of scaffold branches to fill the circular spaces as concentrically as possible around the trunk.
- f. Final trimming cuts shall be made without leaving a stub. Cuts shall be made just outside the shoulder ring area. Extremely flush cuts, which produce large wounds and weaken the tree at the cut, shall not be made.
- g. All trimming shall provide adequate clearance for any obstructed street sign, streetlight, or other approved standard.
- h. Over sidewalks, limbs shall be raised a minimum of seven and a maximum of eight feet from grade to wood. Where sidewalks do not occur or are located on the street side of a parkway, limbs may be retained below the minimum elevation as long as they conform to the natural shape of the species.
- i. Over residential streets, limbs shall be raised gradually from 10 feet at curb to 14 feet over traffic lanes from grade to wood giving the appearance of an arch rather



than an angle. Near driveways where automated refuse containers are placed, it is imperative to have fifteen feet of clearance.

- j. Over arterial streets, limbs should be raised a minimum of 12 and a maximum of 14 feet from grade to wood. A major arterial street may require a higher maximum over central traffic lanes for existing, mature canopy-forming limbs.
- k. Whether over sidewalk or street, where the lowest limb is attached to a trunk above the desired elevation but extends below that elevation, it shall be cut back to a large lateral near the desired elevation, if possible, rather than removed all together, in order to avoid giving the trunk a skinned appearance.
- l. Trimming shall not exceed the amount necessary to achieve the specified elevation at the time of raising. No attempt to trim to a higher elevation to allow for future growth shall be permitted.
- m. No limb over three inches in diameter will be removed without prior City approval.
- n. No lion-tailing. An effect known as "lion-tailing" results from pruning out the inside lateral branches. Lion-tailing, by removing all the inner foliage, displaces the weight to the ends of the branches and may result in sunburned branches, water sprouts, weakened branch structure and limb breakage.
- o. Topping, stump cutting, hat racking, pollarding etc. is not acceptable.

## **General Requirements**

- a. **Certified Tree Workers** - All persons performing tree work on City trees should be trained according to tree care standards accepted by the International Society of Arboriculture.
- b. **Certified to Work Around Electric Lines** - All persons performing tree work on City trees in or around primary electrical lines must be trained to do so according to the "Electrical Safety Orders" of the State of California, including all amendments and revisions.
- c. **Certified Arborist** - Any City contracted tree company shall employ a full-time, permanent certified arborist, as accredited by the International Society of Arboriculture. This person is responsible for ensuring that the contractor's crews are performing work according to the City specifications. It is also recommended that Riverside residents use a firm that employs a certified arborist for any tree work.

- d. **Contractor Qualifications** - All contractors are required to have a state contractor's license for tree work (C-61) and that the contractor adheres to the specifications provided in the bid documents.

## **Safety Prune Specifications**

### **General Requirements**

- a. Proper disposal of all tree debris generated.
- b. Assure good traffic control and minimum disruption to the public.
- c. Assure adequate safety of employees and the public.

### **Safety Tree Pruning Specifications**

Safety tree pruning shall consist of the total removal of those dead or living branches as may menace the future health, strength and attractiveness of trees. Specifically, trees shall be pruned according to the Tree Pruning Specifications as outlined on pages 7, 8 & 9.

## **Tree Preservation Guidelines**

Trees are an essential element of Riverside's image and quality of life. Hardscape elements, such as sidewalks, curbs, gutters and driveways, are also indicative of the City's commitment to maintain its infrastructure. Over the years, broken and damaged sidewalks, curbs, gutters and driveways will have to be replaced throughout the City. As a result, many trees will be involved. Whenever possible, curbs, gutters, and sidewalks should be meandered away from the tree thereby providing more growing space for roots. To manage this process and protect existing trees, the following departmental guidelines have been established:

### **1. Root Pruning**

- a. Whenever sidewalk, curb, gutter, or driveway replacement occurs within four feet of a tree, the site will be inspected by the Urban Forest Section for tree impact assessment. Root pruning may be performed on any tree that the City Urban Forest Section determines can be safely performed without jeopardizing the life of the tree.
- b. All roots greater than two (2) inches in diameter must be cleanly cut to encourage good callus tissue. It is recommended that roots be pruned back to the next root node.

### **2 Sidewalk Renovation**

Trees that would be seriously impacted by root pruning during sidewalk replacements will be inspected by a certified arborist or urban forester in coordination with the Street Division to determine whether:

- a. The repair work can be deferred and a temporary asphalt patch used to eliminate any hazard until other steps can be reviewed and implemented.
- b. The tree can be saved by narrowing the sidewalk near the tree, while still leaving sufficient sidewalk width for disabled access. Standard disability access width is four (4) feet with variances given to 38" inches where absolutely necessary.
- c. The tree can be saved by relocating the sidewalk onto private property and negotiating the appropriate easement.
- d. The tree can be saved by replacing the sidewalk with minimal disruption of the roots (alternatives: a temporary asphalt sidewalk; rubberized sidewalk; use of root barrier fabric; raising the sidewalk grade over the roots; an informal walkway;

other).

- e. To remove the tree and replace it with a minimum 24" boxed replacement tree.

### 3. Curb and Gutter Replacement

Trees that would be seriously impacted by root pruning during curb/gutter replacement will be inspected by a certified arborist or urban forester in coordination with the Street Division to determine whether:

- a. The repair work can be deferred if it does not create drainage problems or otherwise increase street maintenance unnecessarily and is not a hazard.
- b. The tree can be saved by relocating the curb and gutter into the street at least one foot (ideally 2 to 6 feet), thereby narrowing the street width, which in effect may cause the elimination of some street parking.
- c. Where six or more trees along one side of a block are severely affected, consideration is to be given to relocating the curb and gutter into the street along the entire block.
- d. The tree can be saved by replacing the curb and gutter with minimal disruption of the roots (alternatives: temporary asphalt curb and gutter; use of root barrier fabric; other).

### 4. Recovery Period

When significant root pruning on two sides of a tree is required, there will be a 24-month separation between sidewalk and curb/gutter repair to allow time for tree roots to recover. An exception to this policy may be made if the curb/gutter or sidewalk is relocated away from the tree, or other measures are employed that reduce or eliminate root involvement or it is otherwise determined by the Urban Forest Section that root involvement is minimal.

### 5. Construction Projects on City Property

The following guidelines have been developed to protect trees on City property during construction projects:

- a. A root protection zone shall be defined by a minimum 42" high barrier constructed around any potentially impacted tree. This barrier shall be at the drip line or at a distance from the trunk equal to 6 inches for each inch of trunk diameter 4.5 feet above the ground if this method defines a larger area.

- b. Should it be necessary to install irrigation lines within this area, the line shall be located by boring, or an alternate location for the trench is to be established.

The minimum clearance between an open trench and a street tree shall be one (1) foot, or six (6) inches for each inch of trunk diameter measured at 4.5 feet above existing grade if this method defines a larger distance. The maximum clearance shall be ten (10) feet. The contractor shall conform to these provisions unless otherwise directed by the City.

- c. At no time shall any equipment, materials, supplies or fill be allowed within the prescribed root protection zone unless otherwise directed by the City. The root protection zone is defined as the larger of the drip line of 1) the tree or 2) the distance from the trunk equal to six (6) inches for each inch of trunk diameter measured at 4.5 feet above existing grade.

It is recognized that failure to abide by these provisions will result in substantial root damage to trees that may not be immediately apparent. The City will therefore assess damages according to the International Society of Arboriculture standards and bill the responsible party.

## 6. Release Requirements

In order for construction work to begin that will impact a tree, a signed release form must be issued by the Urban Forest Section. This release shall be based on the condition of the tree and an assessment of the impact of the proposed construction. Mitigation measures necessary to protect the tree will also be stated.

In the event a tree must be removed, the Urban Forester will issue a Tree Removal Permit.

## 7. Protecting Tree Roots From Vehicular Compaction

In order to protect our Urban Forest and this City asset, it shall be unlawful for any vehicle to be parked in the public right of way, under the drip line of a City tree in non-paved areas such as parkway strips.

In summary, it is the City's policy to protect its valuable tree resources and also to provide useable, safe parks, sidewalks, curbs, gutter, and other infrastructure features. Although this policy may cost more in the short run, the long-term solutions will benefit the City of Riverside both aesthetically and fiscally.

## Tree Removal Guidelines

The Department is responsible for the maintenance of the street tree system. It is recognized that individual trees can affect the environment of the total community.

The Director or the Director's designee shall authorize all street tree removals, after Commission approval, in writing, with authority granted consistent with this policy.

The Director shall provide the City Council and the Commission with a monthly listing of the tree removal requests, including those from all City departments, all citizens and all other sources, for Commission action. The list shall include the locations of the trees and the staff's recommendations.

### **Hazard:**

1. Definition: A tree that is dying, dead or structurally weak; a traffic obstruction; or injurious to the health, safety, or welfare of the general public.
2. Process: When a tree is determined by authorized staff to be a hazard, the tree will be removed and a replacement tree will be planted at the next appropriate planting cycle, unless inadequate parkway space exists or the location constitutes a hazard. The Director shall report all such tree removals to the Council and Commission in writing. Where long-term repairs can be made to sewer laterals, sidewalk or curb and gutter without endangering the stability of the tree, the tree will not be removed.

### **Undesirable:**

1. Definition: Trees that possess undesirable characteristics significant enough to have caused their elimination from future planting of street trees, as determined by the Commission. Undesirable tree species shall be identified, approved by the Commission, and published.
  - a. Class I Undesirable - tree species that cause chronic damage to infrastructure, i.e. curbs, gutters, sidewalks or other structures and trees, which, in the opinion of the Commission, are causing a nuisance to the property owner significant enough to necessitate removal of the tree. For example, Shamel Ash (*Faxinus udei*) and Carob (*Ceratonia siliqua*)
  - b. Class II Undesirable - tree species that meet the general definition of an undesirable tree, but the undesirable characteristics are not significant enough to necessitate removal of the tree (e.g., heavy

fruit drop, susceptibility to wind damage, susceptibility to disease or insect infestation, etc.). For example, Evergreen Elm (*Ulmus parvifolia*) and Holly Oak (*Quercus ilex*).

### **Removals Because of Economic Considerations:**

A tree considered for removal must meet a minimum of 4 of the criteria listed below before a recommendation for removal is made. Criteria number one must be part of the four.

1. Cost of a damage exceeds 1/3 of the value of the tree.

The problems that the street tree is causing must exceed at least 1/3 the dollar value of the tree. (Value set by the International Society of Arboriculture, tree replacement book.) A \$10,000 valued tree must have caused at least \$3,333.00 in damages.

2. Repeated paid claims against the City due to damage caused by the tree.

3. A request made for removal that authorized staff concurs to be a legitimate request.

4. Recurring problems related to the tree within a 10-year period.

The tree has lifted or broken the sidewalk more than once within 10 years, has broken the sewer lines more than once, (etc.), or other physical damage to hardscape.

5. Comparable problems or concerns in the surrounding area would not lend themselves to removal of all the trees in that area.

6. Potential hazardous conditions.

The tree lends itself to be a possible hazard if not removed, i.e., lifted sidewalk, leaning toward the house, unbalanced tree, future visual site causing an obstruction, etc.

Note: These criteria may not apply toward trees that are considered to be historical, landmark, or in a sensitive ecological and/or historical area.

### **Removal Process:**

1. All tree removals, except hazards, shall be reviewed by the Commission, within a minimum of thirty (30) days prior to the scheduled removal of the trees. Individual property owners and/or occupants shall be notified of the Commission meeting.
2. All non-hazard removals must be assessed by the Tree Subcommittee. (See the attached Evaluation Form) For multiple requests from the same neighborhood each tree will be assessed individually and up to a maximum of 20% can be removed within a three-year period. The Urban Forest Section will track removals to protect neighborhoods from excessive removals. Additional removals from that neighborhood will not be considered for three years, to give the replacement trees an opportunity to fill in the voids.
3. Class I Undesirable trees, i.e., Shamel Ash and Carobs, that are recommended and approved for removal by the Commission, will be removed within three years, contingent on funding. If the property owner does not want to wait the one to three years, they are allowed to pay the city half of the removal costs and have the tree removed within 120 days, contingent on funding.
4. Trees approved for removal by the Commission may be removed by a property owner through any of the following:
  - a. A payment to the City of Riverside to have the City remove and replace the tree as outlined in the approved fee schedule. Note: If it is determined that a replacement tree is inappropriate, then the replacement tree may be planted elsewhere on public right of way.
  - b. Permit from Department to the property owner for removal at owner's expense and subject to payment of a fee, as outlined in the approved fee schedule, to the Department for the replacement tree(s), to be planted in the next replacement cycle. Same note as above.
5. Class II Undesirable trees, i.e., Holly Oak and Evergreen Elm, may be removed and replaced at the property owner's expense with Commission approval provided that the neighborhood removals do not exceed 20% as outlined above in #2.



### **Programmed Tree Removals**

1. A program for the removal of undesirable trees may be developed by the Director or his designee, on the basis of the severity of overall deficiencies including width of parkway, species, conditions of trees, or extent and number of recurrences of chronic structural damage to improvements which shall be approved by the Commission.
2. This program removal may, wherever practicable, be scheduled on a multiple year schedule, removing alternate/intermittent trees so as not to remove all trees at one time, as determined by the Commission at a Commission meeting.

### **Site Restriction:**

1. Definition: Trees that are so located as to prevent a legal improvement to the property.
2. Process:
  - a. Review and approval of street improvement plans by the Director, are subject to the conditional requirements imposed upon the approval.
  - b. The property owner shall remove the tree(s) at owners expense upon application to and issuance of a permit by the Director or his designee and is subject to the conditional requirements imposed upon the approval (e.g., payment of fees for mitigation based on the Asset Value, removal and replacement plantings).

### **Accident/Unauthorized Removals:**

1. Definition: Trees that are removed due to damage from vehicular accident or other accidental causes; or trees removed without legal authorization.
2. Process: Trees removed either due to damage from an accident or - unauthorized removal shall be replaced by the City using funds from any insurance settlement or fines assessed.

**Specific Removal Policies:**

1. Consideration shall be given to retain trees by means of a) relocating sidewalk and/or any utilities; or b) root pruning trees and/or installation of root barriers where it is deemed appropriate and in the best interest of the tree as determined by the Director.
2. The Commission shall review all street tree removal policies of all public agencies within the City and they shall follow the approved Policy Guidelines.
3. Replacement of trees: trees removed shall be replaced by the Department at the next appropriate planting cycle within one hundred and twenty (120) days, provided funding is available according to the Department Planting Guidelines.
4. Relocation: When street improvements mandate that palms or wood trees be removed, if the species is adapted to replanting, every reasonable effort shall be made to relocate said trees.
5. Fees are required for replacement trees and are set by the fee schedule. All replacement trees will be a minimum of 24" box size.
6. Generally, all California and Mexican Fan Palms, Mexican Blue Palm, Guadalupe Palm, Queen Palm, Windmill Palm, in some cases Date Palms and Canary Island Date Palm trees will require relocation and preservation unless approved by Commission.
7. One year maintenance will be required by property owner or contractor for all trees relocated. The property owner or contractor will water and prune the tree to guarantee its survival a minimum of one year after relocation.
8. Any request for the removal of four (4) or more trees together or not, or in a quarter mile square, must be approved by the Park & Recreation Commission.

## **Stump Grinding**

- A. Stump grinding will be limited to the immediate area of the stump and all visible surface roots within the City right-of-way. Private property is not to be renovated for the removal of surface roots or sucker growth, except where the surface roots impair the utilization or safety of the property owner. Obtain prior approval from the property owner for this work.
- B. The void created by the grinding operation will be filled with materials slightly higher than grade to allow for settling. Where no replacement tree is planted, the backfill shall contain approximately 60% soil.

## Street Tree Asset Value

**Purpose:** To describe and specify the asset value of any public tree.

**Definition:** **Asset Value** is the dollar amount assigned to a public tree.

**Dbh** is the designation for the diameter of a tree measured at breast height. (4.5' above ground level)

**Policy:** An asset value will be considered for any public tree. This value will be used for the following: 1) When a public tree must be removed because of a construction project that impacts the public right-of-way; 2) When the Park & Recreation Commission considers any public tree for removal; and 3) When any public tree is damaged and must be removed or is illegally removed.

The dbh will be determined for the tree (s). The asset value will be established as \$50 per inch. (rounded down to the nearest inch)

The asset value is based on the following formula.

- A 24" boxed tree is used as the standard size;
- The average dbh of a 24" box is 2 inches.
- The cost to purchase and plant a 24" boxed tree based on the current contract price is \$160.00
- The cost for plant establishment of this new tree is \$40.
- Total cost for planting and establishing a 24" boxed tree is \$200 or \$100 per diameter inch.

The City acknowledges that some trees are more valuable than others depending on species, location, tree health, etc. A 50% discount will be used to allow for these variables. Therefore, the standard assessed value of any tree will be \$50 per diameter inch at breast height (dbh).

**Street Tree Asset Value** The asset value for public trees is established at \$50 per diameter inch at breast height (dbh.)

## Master Urban Forest Plan Guidelines

One of the most important aspects of caring for Riverside's trees is to insure an ongoing heritage of appropriately planted trees for future generations. All trees planted must conform to the Master Urban Forest Plan, which designates the species of City trees to be planted on each street.

Tree planting requires planning. The Master Urban Forest Plan Guidelines were designed to provide optimum tree selection in order to reduce future problems and expense. The guidelines are used to facilitate the species selection based on a review of tree size at maturity as well as physical characteristics. Each block has been evaluated and designated species have been chosen and approved by the Park & Recreation Commission to ensure that the right tree is planted in the right place.

The Master Urban Forest Plan takes into consideration the full size of a tree at maturity and whether it will fit the growing space. Other characteristics considered are the tree's growth rate, litter from fruit or leaves, insect or disease problems, water needs, temperature hardiness, soil requirements, aesthetic and design criteria.

Another reason for a plan is to make certain that there are never too many trees of one species in an area of the city or citywide. Large populations of one tree species may be lost during an insect or disease epidemic.

Many streets in Riverside are designated with more than one species. This will help reduce the spread of insects and disease on a block-by-block basis and decrease the potential for losing entire populations of specific species in the case of a pest epidemic. Along streets which have mature trees of a single species which provide a closed canopy, such as Camphors, or otherwise provide a special aesthetic quality, the single designated species will be maintained whenever appropriate. The following pages describe the guidelines for determining a designated species for a street.

The following should be considered when designating species for a new City street or for revising the Master Urban Forest Plan:

1. No more than 5% of any one species should be planted in the City. Trees that currently comprise more than 5% of Riverside's public trees are:

Mexican Fan Palm (*Washingtonia robusta*)  
California Fan Palm (*Washingtonia filifera*)  
Crape Myrtle (*Lagerstroemia indica*)  
Shamel Ash (*Fraxinus udei*)  
Holly Oak (*Quercus ilex*)

2. General tree characteristics to be encouraged are (not listed by priority):

- a. Drought tolerance
- b. Heat tolerance
- c. Minimal allergy problems (pollen production)
- d. Native to California
- e. Minimal root damage potential
- f. Long life span
- g. Good branch strength and structure
- h. No major insect/disease problems
- i. Good cold tolerance
- j. Low maintenance
- k. Large shading potential
- l. Future wood utilization/recycling potential
- m. Low amount of natural hydrocarbon production
- n. No messy fruit/other plant parts
- o. Show flowers

3. Specific trees that are considered undesirable and reasons why are:

- a. Carob (*Ceratonia siliqua*) - Seedpods, branch drop, hardscape damage & termites.
- b. Shamel Ash (*Fraxinus uhdei*) - Hardscape damage & sewer line damage.
- c. California Pepper (*Schinus molle*) - Excessive pruning requirements and branch drop.
- d. Holly Oak (*Quercus ilex*) - Excessive litter.
- e. Fruitless Mulberry (*Morus alba*) - Excessive pruning requirements.
- f. Indian Laurel Fig (*Ficus nitida*) - Hardscape damage.
- g. Brazilian Pepper (*Schinus terebinthifolius*) - Excessive pruning requirements.
- h. Bottle tree (*Brachychiton populneus*) - Hardscape damage & litter.

## **Tree Planting Guidelines**

The following guidelines have been developed to promote the health and safety of City trees for years to come. These guidelines and specifications are required for any tree planting on City property or within City right-of-ways.

The City has a goal of planting all vacant sites on City property or within City right-of-way, which meet the requirements for an appropriate planting site (See Planting Site Specifications). Tree planting is currently scheduled for the fall, winter, and spring seasons between November and April. The tree planted must be the designated species as per the most current Master Urban Forest Plan.

The City also has a goal of replacing all trees, which are removed, based on the Tree Removal Guidelines that meet the requirements for an appropriate planting site.

Whenever a vacant site is considered for planting or whenever a City tree is removed a replacement tree will be planted if the following conditions are met:

1. Adequate spacing (both aboveground and underground) is present to allow healthy growth to maturity.
2. Location is conducive to good management practices and does not overly disrupt maintenance activities or utilities.
3. Future maintenance, especially water, is available.
4. Funding is available for planting.

Standard replacement size would be minimum of a 24" box in commercial and 15 gallon in residential areas, unless limited by a grant for trees of a lesser size.

### **Property Owner Plantings**

If a property owner wants a tree planted sooner than the City schedule can accommodate, there are three options.

1. Obtain a permit allowing the property owner to provide the planting at their expense following the City of Riverside's planting specifications.
2. Request that volunteers be asked to schedule the planting when time is available.
3. Pay the City's fee to have the tree planted by the City.

## **Care of Newly Planted Trees**

Care of young trees must be a partnership between the City and residents. The City monitors newly planted trees for the first three years. This includes verifying that the tree is getting deep watering by the resident, training pruning, checking stakes and ties and removal of them when no longer needed. If you notice that a newly planted tree needs water, re-staking, or is otherwise not growing well, please notify the City immediately. Neighborhood trees need the attention of residents who live near them to make sure they grow healthy and strong.

Note: A common cause for the death of young trees is damage to the bark by weed eaters and lawn mowers. It is necessary to keep the ground around the trunk bare except for wood chip mulch. Wood chips can be used, however, they and/or bark should not be placed against the tree's trunk. Any weeding or clipping around the base of the tree's trunk must be done by hand tools so as not to injure the bark.



## **Planting Specifications**

### **I. Street Tree Planting**

#### **A. General**

The Commission shall be the responsible authority for determining the appropriate species or variety of trees planted within the public streets rights-of-way or easements.

#### **B. Specific Planting Policies**

1. Street trees shall be planted in conformance with the approved master plan and in accordance with Department Standard Specifications.
2. A minimum of one street tree shall be planted per lot. Property with frontage of 65 feet or more shall have trees planted at an average maximum spacing of 35 feet (tree to tree) on center. The actual number and spacing for planting will be based on the established canopy width of the designated species as approved by the Park & Recreation Commission. To preserve the integrity of the street tree pattern, where site constraints preclude planting of a street tree within the right-of-way, trees may be planted on private property in those instances where an easement for that purpose has been provided.
3. Property owners may plant street trees at the owner's expense in accordance with Department standards and subject to prior written approval of the Department.
4. Planting of street trees shall be required at the time the property abutting the right-of-way is developed. The owner of the abutting property shall be responsible for the costs of furnishing, installing and providing a minimum of the first year of maintenance for all street tree plantings.
5. To maximize the square footage of tree canopy and its benefit to the City, all new and redeveloped properties both residential and commercial shall be required to provide funding for public trees. Fees are established by the City Council. The City through its contractor will schedule planting of the street trees on or before the time occupancy permits are issued.
6. Trees removed by the Department shall be replaced by the Department

within 120 days of removal. If possible, no trees will be planted by the City between June 1 and September 30.

7. Tree removal through a permit by other agencies shall be subject to both a mitigation and replacement fee and shall be replaced by the City's Park & Recreation Department within 120 days. If possible, no trees will be planted by the City between June 1 and September 30.
8. Fertilization and water of all street trees within the City shall be the responsibility of the abutting property owner, except in reverse frontage and median strips that are maintained by the City. The Department is responsible for all other maintenance after completion of the maintenance period and the written acceptance by the Department.
9. Trees shall not be required to be planted in street right-of-way abutting undeveloped property. If the property owner desires to plant the street right-of-way abutting the owner's undeveloped property, the owner must provide an automatic irrigation system and shall be responsible for the cost of installation and maintenance. The Director, upon approval by the Commission, may require the posting of a bond of a sufficient amount to guarantee installation and care of the appropriate improvements.
10. When the sidewalk is located next to the curb, the trees shall be planted a minimum of one foot from the right-of-way line within the public street right-of-way line or easement. Where right-of-way is not available adjacent to the sidewalk, the trees should be planted in easements behind the sidewalk whenever possible. When a tree well in the sidewalk is the only possible solution, a tree will be selected that will not cause or result in long-range curb and sidewalk damage.
11. In the interest of public safety and maintenance, trees shall be planted:
  - a. A minimum distance from the intersection to provide adequate sight distance. Minimum distance shall be 30 feet from beginning of curve at the curb return, except at secondary and arterial streets, the minimum shall be 50 feet.
  - b. Five (5) feet minimum from fire hydrants, service walks, and driveways.
  - c. Ten (10) feet minimum from sewer laterals, other utility services laterals and water meters.
  - d. Fifteen (15) feet minimum from lamp standards.

- e. With consideration given to those varieties of trees that will not create a conflict with existing overhead electric utility lines.
- 12. All trees, other than palm trees, shall be planted a minimum 15-gallon size in residential areas and 24" box size in commercial areas as determined by the American Association of Nurserymen. Smaller/larger sizes may be permitted/required by the Urban & Community Forest Subcommittee.
- 13. All *Trachycarpus fortunei* (Windmill Palms) shall have four feet of brown trunk or an overall height of 6 feet as measured from the root crown to the tip of the fronds, whichever is greater.
- 14. Palm trees planted in nonresidential areas shall have a minimum of 4 feet of brown trunk or an overall height of 8-12 feet as measured from the root crown to the tip of the fronds, whichever is greater.
- 15. All newly planted trees (except palms) shall be staked per Department standards and nursery stakes removed.
- 16. All staked trees shall be inspected twice a year and the stakes are to be adjusted or removed as necessary.
- 17. All trees planted in tree wells shall be installed and irrigated in a manner to promote deep rooting per Department standards. All trees in wells shall be installed with an automatic irrigation system.

## Tree/Hardscape Conflicts Guidelines

In keeping with the City's policy to preserve and protect healthy trees and to provide for the safety of citizens the following guidelines have been established for correcting hazardous situations that result from tree roots disturbing hardscape in the public right-of-way.

**Inspection** - When tree roots are suspected of causing hardscape damage, the City's tree inspector shall inspect the tree and assess the potential damage. The size, species, structure/condition, and (external) environmental factors should be considered before a recommendation is made.

1. Size - Trunk size (DBH) and height should be noted in relation to the amount of structural roots that should remain to support the tree. Also, does its size merit it as a specimen tree or one of historical significance?
2. Species - The species should be considered for its desirability; is it the right tree for the site? Is it a problem species? Is it a native oak or other desirable species? Etc.
3. Structure and Condition - Inspect the tree for stability; leaning; and crown balance. Check trunk for any cavities, signs of decay or insects that may cause instability, (i.e., root rot, borers, termites). Check the condition of the foliage and note dieback, size and quantity of foliage and note anything that may indicate stress.
4. External or Environmental Factors - Check for adequate growing space. Note proximity to overhead utilities, water meters, lines of sight for driveways, intersections, and traffic signs. Also note damage to private property such as uplifting sidewalks, driveways, retaining walls, structural damage to the public hardscape and the potential for future damage.

### Recommendations

1. Removal - First, note whether the tree meets the conditions in the **Tree Removal Guidelines**, as described in this Manual. If not then would it meet the conditions after root removal. If the tree meets either of these parameters, then recommend removal in order to ensure safety of citizens.
2. Root Pruning - If the inspection warrants removal of offending roots, refer to the **Root Pruning Specifications** section.

3. Off-set - If the root flare or trunk is within two (2) feet of the sidewalk and the sidewalk is wider than the four (4) foot minimum, an offset may be recommended. Root removal may not be necessary with an offset.
4. Ramping - If the inspection warrants retention of all or the majority of offending roots a ramp may be considered. The sidewalk grade change caused by a ramp must be a ratio approved by the City Engineer's office. Also, be sure the proposed ramp does not cause a substantial grade change from the sidewalk to the private property.

## **Tree/Sewer Line Conflicts Guidelines**

In keeping with the City's policy to preserve and protect healthy trees and to provide free flowing sewer lines, the following guidelines have been established for addressing conflict situations that result from tree roots invading sewer laterals.

### **Responsibility**

Residential sewer lateral lines are the sole responsibility of the property/business owner. Owners are responsible for the lateral line beginning at the property to the point of connection to the City main line, which is located in the street or right-of-way. This includes sections of the lateral that may be under the City sidewalks, curbs, or streets.

In the event of a blockage in the lateral line, owners are responsible for determining the cause and clearing the blockage of the line between the building and the City's sewer line. The City's Sewerage Division is not responsible for determining the cause of, or clearing the blockage of a residential/business lateral line.

If the property owner believes a City owned tree has caused the problem, the owner should contact the Urban Forestry Section for instructions on dealing with the problem.

### **Procedure**

1. Notification: When notified of a potential sewer/City owned tree conflict, the Tree Section is to take all of the pertinent information and forward that to the Risk Manager. The property owner is to be given the Risk Manager's phone number.
2. Inspection: The Risk Manager will then have his subcontractor inspect the sewer line to determine damage and the City's responsibility if any. The Tree Section will do a site visit to determine if there is a public tree, what kind of tree, and where it is located if necessary and give this information to Risk Management.
3. Follow Up: Risk Management will determine if the sewer lateral needs to be repaired. If the lateral is to be repaired by the City's contractor and if the repairs cannot be made without removing the tree, then the Urban Forestry Section will be notified and the removal will be scheduled.

## **Tree/Water Line Conflicts Guidelines**

In keeping with the City's policy to preserve and protect healthy trees and to provide uninterrupted water service, the following guidelines have been established for addressing conflict situations that result from tree roots.

### **Responsibility**

Residential water lateral lines are the sole responsibility of the property/business owner. Owners are responsible for the lateral line beginning at the water meter, which is located in the right-of-way to the building. This includes sections of the lateral that may be under the City sidewalks.

In the event of a leak or break in the lateral line, owners are responsible for determining the cause and repairing the line between the building and the City water meter. The City's Water Division is not responsible for determining the cause of, or repairing the residential/business lateral line.

If the property owner believes a City owned tree has caused the problem, the owner should contact the Urban Forestry Section for instructions on dealing with the problem.

### **Procedure**

1. Notification: When notified of a potential water lateral line and City owned tree conflict, the Urban Forestry Section is to take all of the pertinent information and forward that to the Risk Manager. The property owner is to be given the Risk Manager's phone number.
2. Inspection: The Risk Manager will then have his subcontractor inspect the water line to determine damage and the City's responsibility if any. The Urban Forestry Section will do a site visit to determine if there is a public tree, what kind of tree, and where it is located in relation to the water meter and lateral line and give this information to Risk Management.
3. Follow Up: Risk Management will determine if the water lateral needs to be repaired.
4. If the lateral is to be repaired by the City's contractor and if the water line can be rerouted away from the tree, then the Risk Manager will coordinate those repairs with the Water Department.
5. If pruning the City tree roots can repair the water lateral, then the Risk Manager will notify the Urban Forestry Section to coordinate efforts with their contractor.
6. If the lateral is to be repaired by the City's contractor and if the repairs cannot be made without removing the tree, then the Urban Forestry Section will be notified and the removal will be scheduled.

## **Tree/Electric Line Conflicts Guidelines**

In keeping with the City of Riverside's policy to preserve and protect healthy trees and the City of Riverside's Public Utility to provide reliable electric service, the following guidelines have been established for addressing conflict situations that result from tree branches and foliage that interfere with electric lines.

### **Responsibility**

Residential and Commercial Electric Service lines are the sole responsibility of the property/business owner. Owners are responsible for the service line beginning at the power pole to the point of connection to the home or business. If the service wire shows signs of damage from contact with a tree, Public Utilities will either: 1) Repair the wires and install tree guard; 2) Re-route the service so that it does not contact the tree; or 3) Drop the service to allow the home owner to trim the tree.

Cable TV and Telephone Lines are the responsibility of those agencies, not the City of Riverside's Public Utility.

Transmission, Primary and Secondary Electric Lines are the responsibility of Riverside's Public Utility. Based on the California Public Utilities Commission's General Order No. 95, Public Utilities is required to keep its wires clear of branches and foliage from nearby trees.

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### **Line Clearance Trimming Procedure**

1. Notification: When possible, property owners will be notified at least 48 hours in advance via a door hanger of scheduled line clearance services. When emergencies and high priorities occur, this may not be possible.
2. Inspection: Line Clearance inspections are the responsibility of Riverside Public Utilities.
3. Trimming: It is the intent of the City to trim for line clearance on a two-year cycle. Minimal trimming clearance standards will adhere to the California Public Utilities Commission General Order No. 95. Trimming practices will be outlined under the "Tree Pruning Specifications" of this policy.



### **Line Clearance Removal Procedure for Trees in the Public Right-of-Way**

1. Intent: The City of Riverside and the Riverside Public Utilities has a goal of planting the right tree in the right space. Its focus will be a gradual removal of inappropriate trees in the public right of way. Inappropriate trees are those that grow too large to be compatible with the wires. They will be removed and replaced where warranted with appropriate species.
2. Inspection: The Park & Recreation Department, under the guidance of the Urban Forester, will identify those trees under wires needing removal and establish a long-term removal and replacement program.
3. Notification: Adjacent property owners will be notified of the City's intent to remove and replace a public tree that is interfering with overhead power lines.
4. Procedure: Removal of trees, grinding of stumps, and planting of new trees, will follow the specifications outlined in this policy.

### **Line Clearance Removal Procedure for Trees on Private Property**

1. Intent: The City of Riverside and the Riverside Public Utilities has a goal of removing trees on private property that grow too large to be compatible with the wires.
2. Inspection: The Park & Recreation Department under the guidance of the Urban Forester will identify those trees under wires needing removal and establish a long-term removal program.
3. Notification: Property owners will be notified of the City's intent to remove trees that are growing within the 18' utility easement and that interfere with overhead power lines.
4. Refusals: Those property owners who do not want the tree removed will be notified of Public Utilities intent to continue to keep the wires safe on a two year trimming cycle.
5. Procedure: Trees will be flush cut according to the specifications outlined in this policy. If the species of tree is one that suckers from the base, the stump will be ground as much as possible to kill the tree.

### **Line Clearance Procedures for Public Palm Trees that Interfere with Wires.**

1. Intent: The City of Riverside recognizes the value of palm trees to the City's heritage. Every effort will be taken to preserve and protect palms where they have a significant impact on the public right-of-way.
2. Inspection: Public Utilities staff, together with the Urban Forester, will inspect palm tree wire conflicts to determine if the wires can be protected or rerouted without removing the tree.
3. Notification: Where appropriate, adjacent property owners will be notified of the City's intent to remove the tree.
4. Procedure: Palms will be relocated if possible, if not, the tree and stump will be removed following the removal procedures outlined in this policy. A hardwood tree or a small stature palm compatible with overhead wires will be replanted where appropriate.

### **Line Clearance Procedures for Private Palm trees that interfere with wires.**

1. Intent: The City of Riverside and Riverside Public Utilities goal is to eliminate private palm trees that interfere with electric wires.
2. Inspection: Public Utilities staff together with the Urban Forester will inspect private palm tree wire conflicts to determine a course of action depending on if the palm is directly under or to the side of the wires.
3. Notification: When possible, property owners will be notified of the City's intent to cut or remove the tree.
4. Procedure: Palms located under the wires within the 18' easement will be flush cut and removed. Those palms outside the easement will be cut six feet below the wire and the property owner will be responsible for removing the remainder of the tree.
5. Refusals: Where property owners do not want the palm removed, and where the palm can be trimmed to keep the wires safe, Public Utilities will continue to trim them. Once the palm reaches the wires and can no longer be trimmed, the heart of the palm will be removed.

## **Telephone Numbers**

### **City of Riverside**

<b>Park &amp; Recreation Department</b>	909-826-2000
<b>Tree Urban Forestry Division</b>	909-351-6126

## **Glossary**

Arborist	-	One who specializes in the field of Arboriculture.
Arboriculture	-	Planting and care of trees and shrubs in the landscape.
DBH	-	Diameter at breast height, the location used to measure the girth of a tree.
Suckers	-	Vigorous, upright growth arising primarily from below the graft union or the ground from trunks or the roots.
Urban and Community Forestry	-	The management of vegetation in and around human settlements.
Watersprouts	-	Vigorous, upright growth arising primarily from latent buds on the trunk and older branches.